

Remarks

Reconsideration of the application is respectfully requested in view of the foregoing amendments and following remarks. Claims 1-15, 37-42, 44, and 45 are pending in the application. No claims have been allowed. Claims 1, 37, 44 and 45 are independent.

Examiner Telephonic Interview and Restriction Requirement

Applicants wish to thank the Examiner for his time during a telephonic interview on May 4, 2005 in which the Examiner's restriction requirement was discussed.

To expedite prosecution, Applicants elect Group I (claims 1-15, 37-42, and 44-45) and cancel Group II (claims 16-36 and 43) without prejudice. Applicants reserve the right to pursue the canceled claims in a divisional application.

Information Disclosure Statement

Applicants filed an Information Disclosure Statement ("IDS") with accompanying forms 1449 on May 4, 2005. The 1449 form for this IDS has not yet been initialed and returned.

Because this IDS was timely filed, Applicants respectfully request the Examiner to provide Applicants with a copy of the initialed form 1449 to indicate the references listed thereon have been properly considered. Another copy of the references can be obtained by contacting the undersigned attorney.

Response to Informality Objection

In the Action, the Office objects to claim 44 as allegedly being a duplicate of claims 1 and 15. Applicants respectfully traverse this objection.

Claim 44 is not a duplicate of claim 1 and 15. Claim 1 is a method claim, and claim 15 recites a "computer-readable medium having stored thereon computer-executable instructions for causing a computer to perform the method of claim 1." However, amended claim 44 recites, for example, "means for processing high dynamic range image information." Such means for processing is not recited in claim 1 or claim 15.

Applicants respectfully request that this objection be withdrawn.

Response to § 112 Rejections

In the Action, the Office objects to claim 44 under 35 U.S.C. § 112, first and sixth paragraphs. Applicant respectfully traverses these rejections.

As amended, claim 44 recites:

A computer system comprising:
means for processing high dynamic range image information, wherein the high dynamic range image information defines a high dynamic range image;
means for processing region of interest information, the region of interest information defining one or more regions of the high dynamic range image;
means for causing a computer to display an image comprising:
a background image constructed from the high dynamic range image information; and
one or more portions of the high dynamic range image corresponding to the one or more regions, the one or more portions of the high dynamic range image displayed in accordance with at least one display parameter that differs from a corresponding display parameter for the background image.

The specification is enabling for each element of claim 44. Section I of the Detailed Description describes processing units, memory, storage, and input/output devices (keyboard, mouse, display, etc.). For example, the specification states, "The invention can be described in the general context of computer-executable instructions, such as those included in program modules, being executed in a computing environment on a target real or virtual processor." [See Application at p. 8, lines 6-8.] Sections II and III of the Detailed Description describe various techniques for processing high dynamic range image information, processing region of interest information, and displaying images.

With regard to the Office's requests at page 6 of the Action, Applicants have pointed out support in the specification for amended claim 44. [See Action at p. 6.] Applicants respectfully submit that no amendment to the specification is necessary to overcome the rejection of claim 44 (as amended) under § 112, sixth paragraph. [See Action at p. 6.]

Applicants respectfully request that the rejections under § 112 be withdrawn.

Response to § 103(a) Rejections

The Action rejects claims 1-15, 37-42, 44 and 45 under 35 U.S.C. § 103(a). Applicants respectfully traverse these rejections.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. In addition, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (*See* MPEP § 2142.) Motivations to combine or modify references must come from the references themselves or be within the body of knowledge in the art. (*See* MPEP § 2143.01.)

Applicants respectfully submit that the claims in their present form are allowable over the applied art, as explained in detail below.

A. Rejection of Claims 1-4, 8-10, 14-15, 37-38, 40 and 44

In the Action, the Office rejects claims 1-4, 8-10, 14-15, 37-38, 40 and 44 under § 103(a) in view of in view of Siprut, *Adobe Photoshop Handbook* (1995) ("Photoshop") and the software program HDRView. Applicants respectfully traverse this rejection.

Claims 1-4, 8-10 and 14-15

As amended, claim 1 recites in part:

displaying a derived image comprising:
a background image constructed from the high dynamic range image information; and
one or more portions of the high dynamic range image corresponding to the one or more regions, the one or more portions of the high dynamic range image displayed in accordance with at least one display parameter that differs from a corresponding display parameter for the background image.

The Action states that "the functionality of HDRView could be incorporated by Photoshop to provide the recited limitations." Applicants respectfully disagree.

A combination of Photoshop and HDRView would not teach or suggest each element of independent claim 1. HDRView describes "a simple Windows based viewer for high dynamic range images" [*see* HDRView at p. 1] and Photoshop describes a software program for editing and manipulating digital images. But the recited language of claim 1 is not taught or suggested by HDRView and Photoshop, either alone or in combination.

For example, the combination of HDRView and Photoshop does not teach or suggest "displaying a derived image comprising: a background image constructed from the high dynamic

range image information; and one or more portions of the high dynamic range image corresponding to the one or more regions," as recited in claim 1. Although the Action asserts at pages 7 and 8 of the Action that "Photoshop teaches selecting a region as set forth above and altering its contents (for example, via applying a filter . . .)" and that "Photoshop pages 305-307 clearly describe how chrominance and luminance can be manipulated in various color spaces that Photoshop can work with," such a description does not teach or suggest the cited language of claim 1. The high dynamic range image is not simply "manipulated" or "altered." For example, the Application states, "the regions of interest can have tone-mapped exposure levels such that their dynamic range is expanded to fill the dynamic range of the display, while the background image has a dynamic range that is compressed to the display's dynamic range." [See Application at p. 10, lines 11-13.]

The Action also states that "it would be obvious (as shown in Photoshop Fig. 1-6) that the user can select a region, and then obviously changing the exposure value for that region alone would be equivalent to applying a Photoshop filter." However, even if it were obvious to apply a filter to a high dynamic range image, applying a "filter" to a high dynamic range image is not recited in claim 1. Furthermore, applying a Photoshop filter to a high dynamic range image is not equivalent to the cited language of claim 1. Photoshop describes a "Lighting Effects filter" at pages 380-382, in which an "Exposure slider controls the amount of lightness and darkness of the light." But this filter only adds light sources and does not reveal high dynamic range image information that might not be visible on a low dynamic range display. Other filters described in Photoshop affect image data in other ways (e.g., "spherize," "twirl," "wave," etc.). However, the passages cited in the Action that describe filters in Photoshop do not suggest any filter that would allow a user to view high dynamic range image information in a region of interest.

Further the Office has failed to establish a *prima facie* case of obviousness because the Office has failed to provide a rational motivation to combine or modify these references in such a way as to produce the invention of claim 1. The Action states, "it would be obvious to combine the additional capabilities of HDRView with Photoshop, e.g. to allow Photoshop to be able to view HDR images in the same manner as HDRView, and adjust exposure, etc., to get the desired final image to be output or exported as a JPEG or similar, as stated in the description of the HDRView software on the first page, since Photoshop does not natively handle HDR images in this manner." [See Action at p. 8.] The Office seems to assert that one would be motivated to

add a capability to Photoshop simply because Photoshop lacks the capability. In other words, the Office seems to assert that one would be motivated to modify Photoshop to add the HDRView feature because Photoshop does not have the HDRView feature. Applicants do not see how the fact that "Photoshop does not natively handle HDR images in this manner" would lead one of ordinary skill in the art to combine HDRView and Photoshop. The fact that Photoshop lacks some feature does not in itself provide motivation to combine it with another application to add the feature that it lacks.

Even if Photoshop were combined with HDRView, the result of this combination would be, as the Action points out, "to allow Photoshop to be able to view HDR images in the same manner as HDRView": that is, by allowing pan, zoom, exposure adjustment, rotate, flip, and save actions on high dynamic range images, but without "displaying a derived image comprising: a background image constructed from the high dynamic range image information; and one or more portions of the high dynamic range image corresponding to the one or more regions, the one or more portions of the high dynamic range image displayed in accordance with at least one display parameter that differs from a corresponding display parameter for the background image," as recited in claim 1. Thus, a combination of Photoshop and HDRView, if motivation could be found to make such a combination, would still not teach or suggest the recited language of claim 1.

Claims 2-4, 8-10 and 14-15 depend from claim 1 and should be allowable for at least the reasons given above in support of claim 1.

The rejections of claims 1-4, 8-10 and 14-15 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

The rejections of dependent claims 5-7 and 11-13 are addressed below.

Claims 37-38 and 40

The Action states at page 11, "this claim is obvious and all the limitations are met." Applicants respectfully disagree.

As amended, independent claim 37 recites in part:

a high dynamic range image viewer operable to output to a display one or more derived high dynamic range images each comprising a background image and one or more selected regions of interest, wherein a display parameter for the

background image differs from a corresponding display parameter for the one or more selected regions of interest.

The applied art does not teach this language of claim 37. Therefore, independent claim 37 is in condition for allowance. For example, Photoshop and HDRView, individually or in combination, do not teach or suggest "one or more derived high dynamic range images each comprising a background image and one or more selected regions of interest, wherein a display parameter for the background image differs from a corresponding display parameter for the one or more selected regions of interest."

Claims 38 and 40 depend from claim 37 and should be allowable for at least the reasons given above in support of claim 37.

The rejections of claims 37-38 and 40 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

The rejections of dependent claims 39, 41 and 42 are addressed below.

Claim 44

The Action states at page 9, "no additional limitations are brought into play by the invocation of 35 U.S.C. 112, sixth paragraph, and the claim is thusly rejected in the same manner as claim 1." Applicants respectfully disagree.

As amended, independent claim 44 recites in part:

means for causing a computer to display an image comprising:
a background image constructed from the high dynamic range image information; and
one or more portions of the high dynamic range image corresponding to the one or more regions, the one or more portions of the high dynamic range image displayed in accordance with at least one display parameter that differs from a corresponding display parameter for the background image.

The applied art does not teach this language of claim 44. Therefore, independent claim 44 is in condition for allowance. For example, Photoshop and HDRView, individually or in combination, do not teach or suggest "an image comprising: a background image constructed from the high dynamic range image information; and one or more portions of the high dynamic range image corresponding to the one or more regions, the one or more portions of the high

dynamic range image displayed in accordance with at least one display parameter that differs from a corresponding display parameter for the background image."

The rejection of claim 44 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

B. Rejection of Claim 5

In the Action, the Office rejects claim 5 under § 103(a) in view of Photoshop, HDRView and Jyrinki, "High Dynamic Range Images," (document dated "7.4.2003" and "Spring 2003"). Applicants respectfully traverse this rejection.

The applied art does not teach or suggest each and every element of dependent claim 5. Jyrinki provides descriptions of techniques for displaying high dynamic range images on low dynamic range displays (e.g., using tone mapping), but the applied art does not teach or suggest the recited language of independent claim 1. Because the applied art does not teach or suggest at least one element of independent claim 1, claim 5 is allowable at least for the reasons given above for the allowability of its parent claim. Therefore, the rejection of claim 5 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

C. Rejections of Claims 6 and 7

In the Action, the Office rejects claims 6 and 7 under § 103(a) in view of Photoshop, HDRView, Jyrinki and Debevec et al., "Recovering High Dynamic Range Radiance Maps from Photographs," (1997) ("Debevec"). Applicants respectfully traverse these rejections.

The applied art does not teach or suggest each and every element of dependent claims 6 and 7. Debevec provides descriptions of recovering high dynamic range radiance maps from photographs taken with conventional imaging equipment [*see* Debevec at abstract], but the applied art does not teach or suggest the recited language of independent claim 1. Because the applied art does not teach or suggest at least one element of independent claim 1, claims 6 and 7 are allowable at least for the reasons given above for the allowability of their parent claim. Therefore, the rejection of claims 6 and 7 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

D. Rejections of Claims 11 and 45

In the Action, the Office rejects claims 11 and 45 under § 103(a) in view of Photoshop, HDRView, and Durand et al., "Fast Bi-lateral Filtering for the Display of High-Dynamic-Range Images," (2002) ("Durand"). Applicants respectfully traverse these rejections.

Claim 11

The applied art does not teach or suggest each and every element of dependent claim 11. Durand provides descriptions of "a fast and robust operator that takes a high-dynamic-range image as input, and compresses the contrast while preserving details of the original image" [*see* Durand at p. 257, right column] but the applied art does not teach or suggest the recited language of independent claim 1. Because the applied art does not teach or suggest at least one element of independent claim 1, claim 11 is allowable at least for the reasons given above for the allowability of its parent claim. Therefore, the rejection of claim 11 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

Claim 45

As amended, independent claim 45 recites in part:

displaying one or more images, each of the one or more displayed images comprising:

a background image constructed from the high dynamic range image information, along with one or more portions of the high dynamic range image corresponding to the one or more user-selected regions, wherein the one or more portions are displayed with a tone mapping parameter that differs from a corresponding parameter for the background image to facilitate application of tone mapping to the high dynamic range image during image editing.

The applied art does not teach this language of claim 45. Therefore, independent claim 45 is in condition for allowance. For example, Photoshop and HDRView, individually or in combination, do not teach or suggest an image comprising "a background image constructed from the high dynamic range image information, along with one or more portions of the high dynamic range image corresponding to the one or more user-selected regions, wherein the one or more portions are displayed with a tone mapping parameter that differs from a corresponding parameter for the background image."

The rejection of claim 45 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

E. Rejections of Claims 12 and 42

In the Action, the Office rejects claims 12 and 42 under § 103(a) in view of Photoshop, HDRView and U.S. Patent Application Publication No. 2003/0142126 ("Estrada"). Applicants respectfully traverse these rejections.

The applied art does not teach or suggest each and every element of dependent claim 12. Estrada provides descriptions of a "system and method . . . for dynamically generating viewable graphics," but the applied art does not teach or suggest the recited language of independent claim 1. Because the applied art does not teach or suggest at least one element of independent claim 1, claim 12 is allowable at least for the reasons given above for the allowability of its parent claim. Therefore, the rejection of claim 12 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

With regard to claim 42, claim 37, from which claim 42 depends, recites in part, "one or more derived high dynamic range images each comprising a background image and one or more selected regions of interest, wherein a display parameter for the background image differs from a corresponding display parameter for the one or more selected regions of interest." The applied art does not teach or suggest the recited language of independent claim 37. Because the applied art does not teach or suggest at least one element of independent claim 37, claim 42 is allowable at least for the reasons given above for the allowability of its parent claim. Therefore, the rejection of claim 42 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

F. Rejection of Claim 13

In the Action, the Office rejects claim 13 under § 103(a) in view of Photoshop, HDRView, U.S. Patent No. 6,219,459 to Kurashige et al. ("Kurashige"), U.S. Patent No. 6,424,287 to Doerry et al. ("Doerry"), U.S. Patent No. 6,770,879 to Azordegan et al. ("Azordegan"), and U.S. Patent Application Publication No. 2004/0184059 ("Chun"). Applicants respectfully traverse this rejection.

The applied art does not teach or suggest each and every element of dependent claim 13. Kurashige, Doerry, Azordegan and Chun do not teach or suggest the recited language of independent claim 1. Because the applied art does not teach or suggest at least one element of independent claim 1, claim 13 is allowable at least for the reasons given above for the allowability of its parent claim. Therefore, the rejection of claim 13 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

G. Rejection of Claim 39

In the Action, the Office rejects claim 39 under § 103(a) in view of Photoshop, HDRView and U.S. Patent Application Publication No. 2002/0154144 ("Lofgren"). Applicants respectfully traverse this rejection.

The applied art does not teach or suggest each and every element of dependent claim 39. Lofgren provides descriptions of derivative image management using digital watermarks, but the applied art does not describe high dynamic range images and does not teach or suggest the recited language of independent claim 37. Because the applied art does not teach or suggest at least one element of independent claim 37, claim 39 is allowable at least for the reasons given above for the allowability of its parent claim. Therefore, the rejection of claim 39 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

H. Rejection of Claim 41

In the Action, the Office rejects claim 41 under § 103(a) in view of Photoshop, HDRView and U.S. Patent No. 6,546,144 to Fukuhara et al. ("Fukuhara"). Applicants respectfully traverse this rejection.

The applied art does not teach or suggest each and every element of dependent claim 41. Fukuhara provides descriptions of a "method and apparatus whereby a thumbnail image or an image converted in resolution can be stored or displayed," but the applied art does not teach or suggest the recited language of independent claim 37. Because the applied art does not teach or suggest at least one element of independent claim 37, claim 41 is allowable at least for the reasons given above for the allowability of its parent claim. Therefore, the rejection of claim 41 under 35 U.S.C. § 103(a) should be withdrawn. Such action is respectfully requested.

Response to Office's Characterization of Applicant's Date of Invention

At page 7 the Action states, "Microsoft Office has come with a Photo Editor since 1991 (if a user clicks on the About window, it shows as copyright 1991-1998, which clearly proves a date of conception at least five years before applicant's invention)."

Applicants respectfully disagree and reserve the right to provide evidence of conception or reduction to practice prior to the application date.

Response to Office's Allegation of Applicants' Admission of "Essential" Components

At page 5 the Action states, "the other, essential elements are not present, and applicant has admitted in the specification that such components are essential to the practice of the invention."

Applicants respectfully disagree. The Action does not explain what the "other, essential elements" are, and Applicants disagree that any admission has been made in the specification as to whether any particular component or element of the invention is "essential."

Request For Interview

If any issues remain, the Examiner is formally requested to contact the undersigned attorney prior to issuance of the next Office Action in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicants submit the foregoing formal Amendment so that the Examiner may fully evaluate Applicants' position, thereby enabling the interview to be more focused.

This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

Conclusion

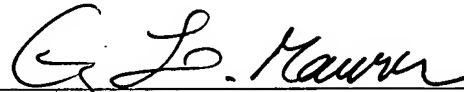
The claims in their present form should now be allowable. Such action is respectfully requested.

Respectfully submitted,

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